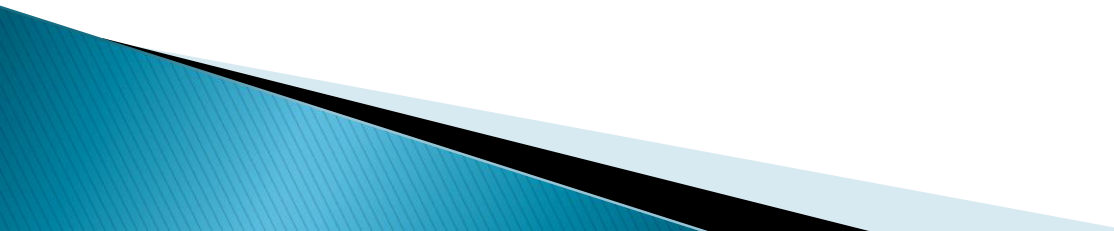


Fairfax County Stormwater Management Ordinance

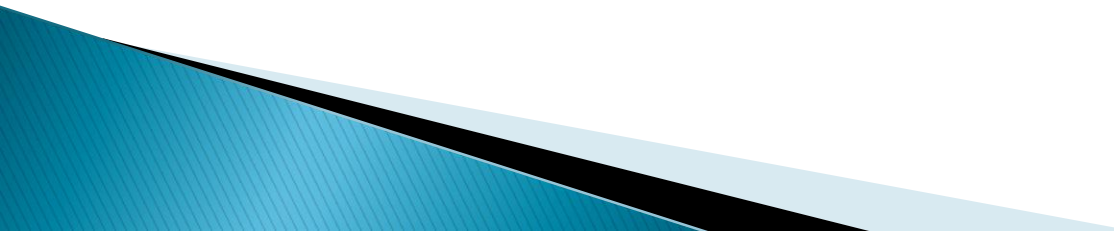
Stakeholder Issue Report–Out Meeting

July 24, 2013

Agenda

- ▶ Process Review
 - ▶ Summary of Stakeholder Issues
 - ▶ County Response/Proposed Ordinance
 - ▶ Next Steps
 - ▶ Questions and Comments
- 

Overall Purpose and Goals

- ▶ Comply with the new Virginia Stormwater Management Regulations
 - ▶ Identify and consider:
 - Areas where the County has flexibility or may want to adopt more stringent requirements; and,
 - Opportunities to strengthen program coordination and effectiveness.
 - ▶ Stakeholder feedback is a key factor in informing recommendations presented to the Board of Supervisors
- 

Stormwater Ordinance Timeline

(Note, milestone dates from the 7/24/13 slide have been corrected)

Ordinance Effective Date – July 1, 2014



Staff/Industry Training

Final Submission to DEQ – No Later Than April 1, 2014

Submission Package to DEQ – by December 15, 2013

Adoption by BOS – December 2013

Planning Commission Hearing – October 2013

BOS Authorization – September 2013

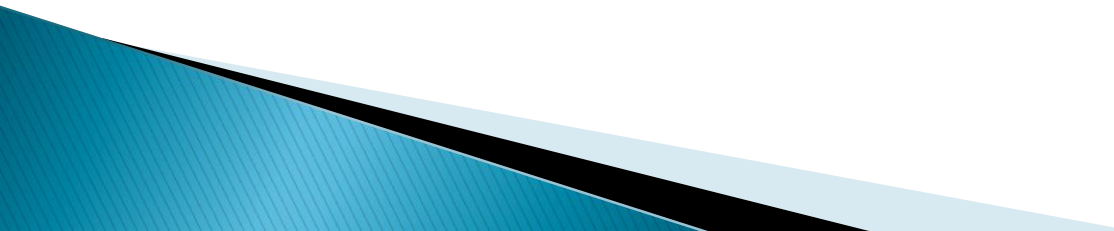
★ **Final Stakeholder Meeting – July 24, 2013**

BOS Environment Committee – June 11, 2013

BOS Environment Committee – May 7, 2013

Preliminary Package to DCR – February 2013

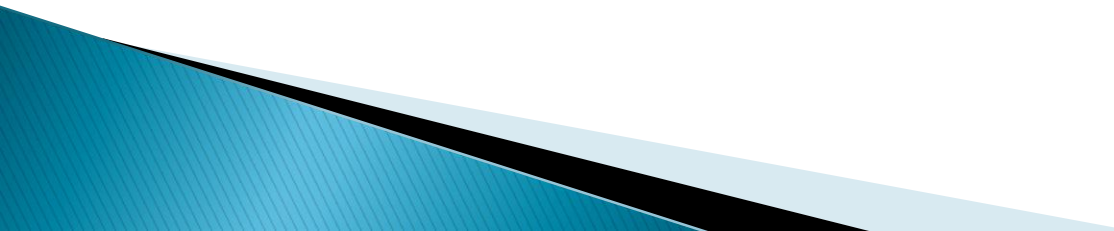
Tonight's Goals

- ▶ Report on how stakeholder input shaped the draft stormwater ordinance.
 - ▶ Provide an opportunity for questions and answers.
 - ▶ Highlight additional opportunities for input including on-line comments.
 - ▶ Frame Phase 2 issues that will be addressed after initial ordinance adoption.
- 

Stakeholder Process

- ▶ Kick-off on July 24, 2012
- ▶ Stakeholder participation:
 - Invitations to stakeholder groups (potential groups presented at kick-off)
 - Self nominations
 - More than 100 total participants
- ▶ Two meetings with issue break-out groups:
 - September 24, 2012
 - November 10, 2012

Stakeholder Issues

- ▶ Single-Family Home Exemptions
 - ▶ Stormwater Facility Inspection Reports by Owners
 - ▶ Nutrient Credit Offsets
 - ▶ Pro Rata Share Program
 - ▶ Adequate Outfall Requirements
 - ▶ BMP Facilities in Residential Areas
 - ▶ Use and Location of BMPs
- 

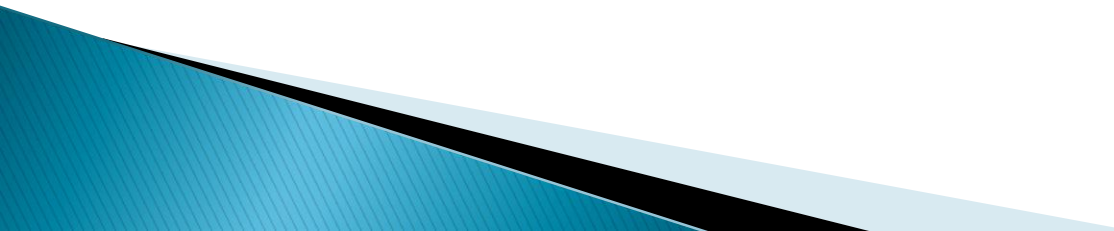
Single-Family Home Exemptions

Key Issues:

- ▶ Virginia Code allows an exemption for single-family properties between 2,500 SF and one acre.
 - Less than 2,500 SF is exempted by other provisions.
- ▶ Small BMPs required under these circumstances are difficult to site, track, and enforce.
- ▶ The cumulative impact of exemptions can result in flooding and negatively affect water quality.

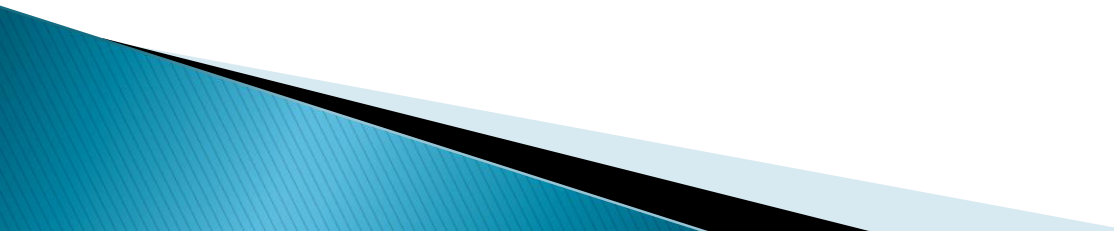
Single-Family Home Exemptions

Key Discussion Points:

- ▶ Consider making exemptions above a certain square feet (possibly 5,000) of disturbance subject to conditions.
 - ▶ Consider site-specific criteria such as existing flooding and stream conditions, soils, ratio of land to impervious cover, and the nature of the structure.
 - ▶ Consider innovative enforcement arrangements such as requiring the owner to purchase insurance or having the County charge a fee to conduct maintenance.
- 

Facility Inspections by Owners

Key Issues:

- ▶ Virginia Code requires “submission of inspection and maintenance reports” to the County.
 - ▶ This is different than the compliance inspections that must be performed by the County at least once every five years.
 - ▶ The County has discretion over timing and the qualifications required for those submitting inspections.
- 

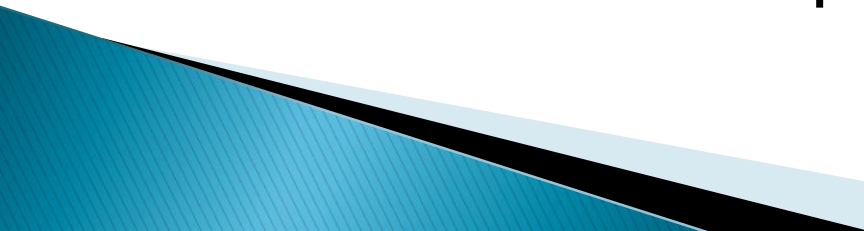
Facility Inspections by Owners

Key Discussion Points:

- ▶ Develop a matrix of BMP-specific inspection needs.
- ▶ Education is key:
 - Ensure the real estate transfer process highlights legal responsibilities
 - Facilities should be clearly identified
- ▶ Enforcement needs to be clearly defined.
- ▶ Consider cost share to help rehabilitate older facilities that have not been maintained.

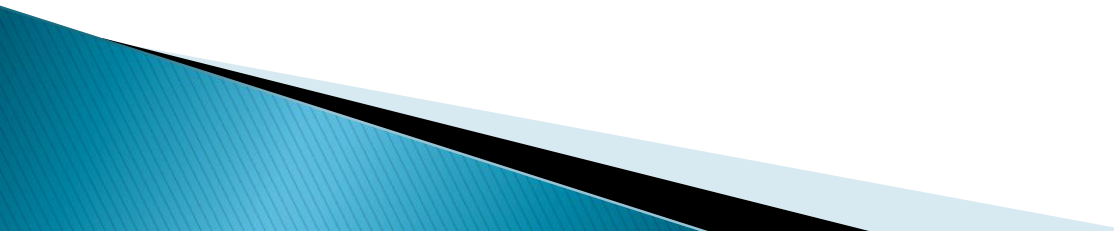
Nutrient Credit Offsets

Key Issues:

- ▶ Virginia Code requires the County to allow nutrient credit offset under certain circumstances.
 - ▶ The County maintains the ability to allow offsets under other circumstances.
 - ▶ Offset credits can be used to reduce compliance costs.
 - ▶ Some local streams are nutrient sensitive, such as the Occoquan and the Potomac River.
- 

Nutrient Credit Offsets

Key Discussion Points:

- ▶ Balance the impact to local water resources with cost efficiency.
 - ▶ Incentivize keeping offsets locally.
 - ▶ Minimize the need for tracking or reporting.
- 

Impact on Pro-Rata Share

Key Issues:

- ▶ The new Runoff Reduction Method addresses water quantity partially through infiltrating runoff into the soil.
- ▶ Potential affect on pro-rata share calculations.

Impact on Pro-Rata Share

Key Discussion Points:

- ▶ Investigate how the new regulations impact the final build-out of a watershed and how the watershed needs to be managed.
- ▶ Consider consolidating the program; there are too many individual watersheds with individual rates.

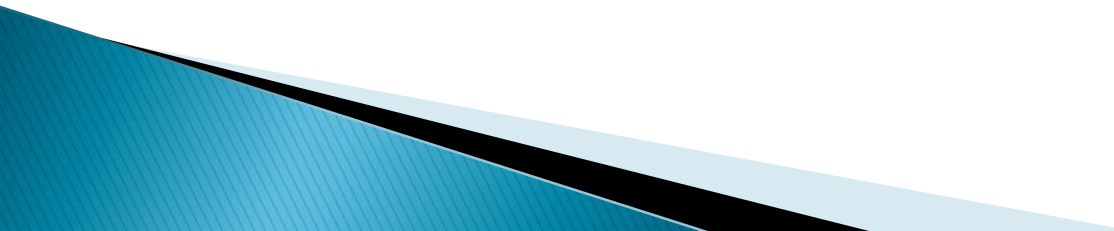
Adequate Outfall and Detention

Key Issues:

- ▶ New detention provisions that eliminate the need for a downstream adequacy review are less stringent than the current County PFM.
- ▶ “Pre” conditions in the PFM are assumed to be a forest in good condition, while the state defines “pre” as the existing conditions of a site.
 - The state requires the use of an improvement factor.
- ▶ Virginia Code allows Fairfax County to establish a more stringent standard.


Adequate Outfall and Detention

Key Discussion Points:

- ▶ Consider the location of a project in a watershed when determining detention requirements.
 - ▶ Consider added flexibility to the “bed and banks” requirement recognizing other stable natural systems (such as wetlands).
 - ▶ For erosion protection, consider a compromise to design to the 1.5 year storm.
 - ▶ For flood protection, the 10-year storm is increasing and it may be more appropriate to set a rainfall value at which there is a requirement for flood protection.
 - ▶ Consider a hybrid of the state detention method using good forest cover as the pre-development condition.
- 


BMPs in Residential Areas

Key Issues:

- ▶ New state technical requirements favor implementation of smaller LID-style facilities on individual lots.
 - ▶ Current County policy is to require BMPs to be on out-lots except for infill or subdivisions with three or fewer lots.
 - ▶ Requiring small BMPs to be placed on out-lots could present significant site design challenges.
 - ▶ Homeowner removal/modification of BMPs is a significant concern.
- 

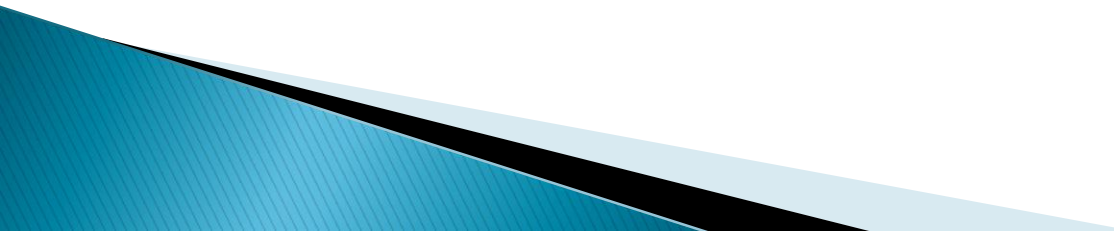
BMPs in Residential Areas

Key Discussion Points:

- ▶ On-lot residential BMPs should be available as an option under certain, well-defined circumstances.
 - ▶ Individual BMPs need to be assessed for appropriateness for on-lot use, including safety and long-term maintenance costs.
 - ▶ A robust education program is essential. This includes ongoing education when a property is transferred.
 - ▶ Inspections should be BMP-specific and done by qualified personnel.
 - ▶ Consider innovative enforcement arrangements or maintenance incentives.
- 

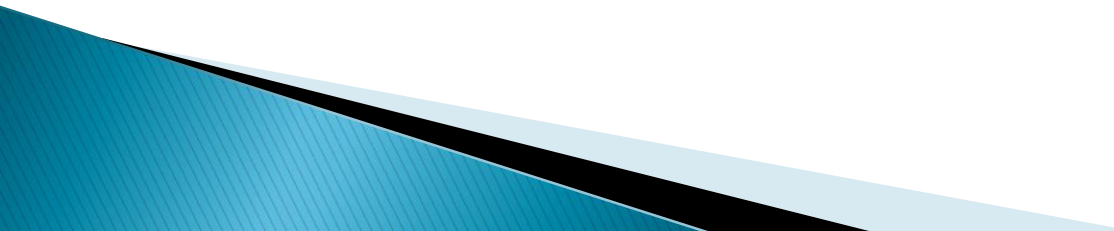
Use and Location of BMPs

Key Issues:

- ▶ Virginia Code and BMP Clearinghouse list the BMPs that may be used to meet requirements.
 - ▶ Several are different than what is in the current County PFM or there is no equivalent.
 - ▶ The County may restrict the use of certain BMPs with written justification.
- 

Use and Location of BMPs

Key Discussion Points:

- ▶ Don't automatically take Clearinghouse tools off the table. Use approved state pollutant removal efficiencies.
 - ▶ Focus limitations based on structural issues and specific site conditions.
 - ▶ Assess the maintenance burden of BMPs and consider requiring financial planning/set-asides for long-term costs.
- 

Phase I Components

Single Family Home Exemption

▶ Description

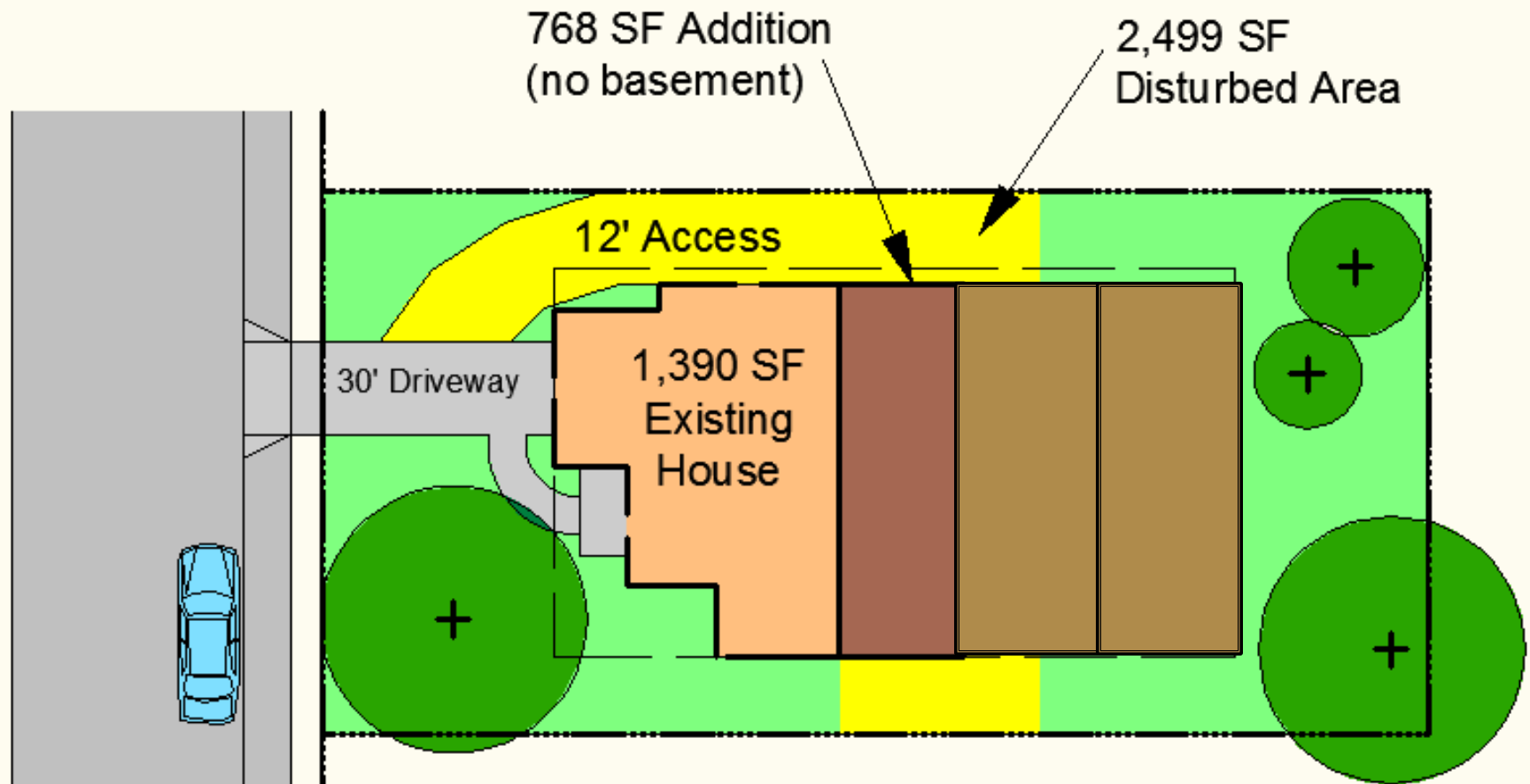
- Maintain the current exemption for disturbed area up to 2,500 SF:
 - This represent about 92% of residential building permits for additions and accessory structures
- Disturbed area between 2,500 SF and 1 acre:
 - Exempts the activity if the impervious cover is less than 18% of the total lot size or less than 2,500 SF of impervious area
 - Exemption does not affect Resource Protection Area (RPA) or erosion and sediment control (E&SC) requirements
- Advertised ordinance will allow for an alternate set of values to be selected for adoption.

Single Family Home Exemption

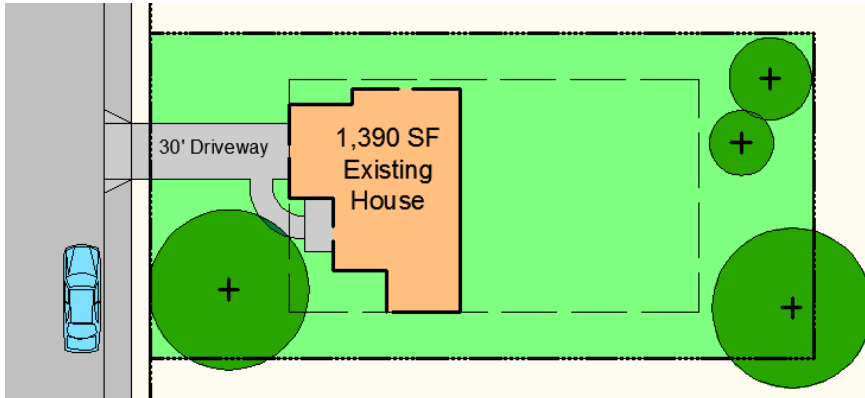
▶ Rationale

- Options were considered based on stakeholder input.
- Incorporates the 18% impervious limit from current code with accommodation for small lots.

Less Than 2,500 SF of Disturbed Area (Current and Proposed)

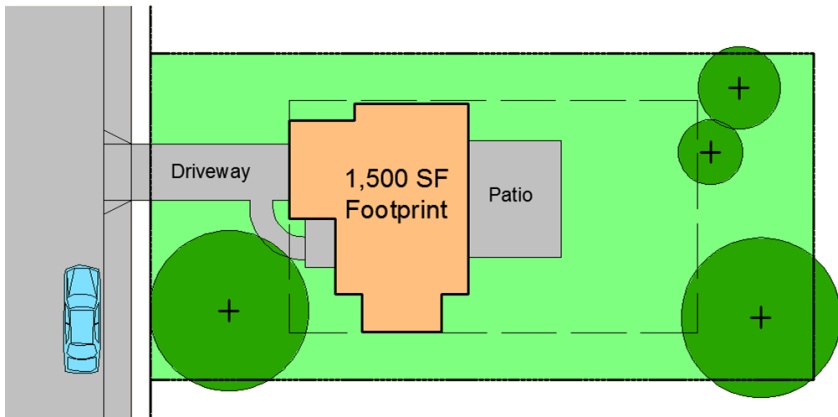


New Infill Home Construction



Current

Maximum Allowances on $\frac{1}{4}$ Acre Lot
Allowed Imperviousness **17.99%**
(1,799 SF)



Proposed

Maximum Allowances on $\frac{1}{4}$ Acre Lot
Allowed Imperviousness **25%**
(2,500 SF)
*Governed by 2,500 SF
Impervious Area*

Facility Inspections by Owners

► Description

- Privately maintained BMPs will require annual owner inspections.
- Standard private maintenance agreements will be updated to address detailed requirements.
- Advertised PFM amendment alternate will allow for the County to expand its residential BMP maintenance program (covered in more depth under “BMPs in Residential Areas”).
- Non-residential BMPs would still be privately maintained

Facility Inspections by Owners

▶ Rationale

- Greater owner awareness of BMPs and maintenance needs.
- More likely to result in adequate BMP maintenance.

Nutrient Credit Offsets

▶ Description

- State minimum nutrient offset provisions incorporated into the ordinance.
- Qualifying nonpoint nutrient offset programs must be established per the Code of Virginia.

▶ Rationale

- Localities are required to include offsite options for certain sites when:
 - Less than 5 acres of land disturbance, or
 - Post-construction phosphorous control requirement is less than 10 pounds per year

Adequate Outfall

► Description

- Extent of downstream review is per minimum state regulations – this exceeds current PFM requirements.
- Current PFM requirements for the “detention method” (which allows development without a detailed outfall analysis) are replaced with the state methodology.
 - However, the pre-development forested condition requirement will be kept.
- Current PFM 2-year detention requirement is kept in addition to state required 1-year and 10-year control.

Adequate Outfall

- ▶ Rationale

- The recommended approach integrates the state methodology with key elements of the current PFM adequate outfall requirements.

BMP Facilities in Residential Areas

► Description

- Alternative 1: Expand the County maintenance program to the following BMPs in residential areas:

Sheetflow to Vegetated Filter	Constructed Wetland
Infiltration	Wet Pond
Bioretention	Extended Detention Pond
Vegetated and Wet Swales	Manufactured (Proprietary)
Filtering Practices	

- County maintenance would be limited to functionality, not aesthetics.
- Would apply to BMPs after 7/1/2014.
- Facility and access easements will be required.
- Alternative 2: Keep the existing BMP maintenance program.

BMP Facilities in Residential Areas

► Description Cont'd.

- Non-residential BMPs will remain privately maintained.
- The following residential BMPs would remain privately maintained:
 - Rooftop Disconnection
 - Soil Amendment
 - Reforestation
 - Vegetated Roof
 - Rainwater Harvesting
 - Permeable Pavement
- The County will develop a conversion policy and program for acceptance of allowed existing residential BMPs.

Example of Public BMP Easement and Outlot Layout Issues to be Addressed in the PFM



BMP Facilities in Residential Areas

- ▶ Rationale for Expanded Public Maintenance
 - Greater assurance of BMP functionality resulting in increased environmental benefits
 - Reduces the potential number of enforcement actions against homeowners:
 - Staff time and cost savings
 - County may be able to pursue more cost effective solutions in the future with greater control of the County-wide system.

Use and Location of BMPs

► Description

- PFM amendment provisions:
 - Allow current County standard BMP types, updated to Virginia specifications
 - For these BMPs, current restrictions were maintained
 - Allow for certain BMPs as non-credited facilities depending on the location
 - Offer computational benefits for these BMPs
 - Certain BMPs require Director approval for specific uses
 - Matrix for BMP use/location
- Establish an evaluation process for new BMPs approved by state (policy, not in the ordinance)

Use and Location of BMPs

► Rationale

- State Clearinghouse BMPs aren't recommended for all site locations/uses:
 - Examples: downspout disconnection, porous pavement, green roof (in residential areas)
 - Limited flexibility is allowed for these BMPs in certain situations

Matrix of Use and Location of BMPs

Table 6.3 Use and Location of BMPs (√ denotes allowed use)

<u>BMP</u>	<u>Non-residential</u>	<u>Multi-family and mixed-use</u>	<u>Residential subdivision lots^{1,2}</u>	<u>Outlots in residential subdivisions</u>	<u>Nonbonded subdivision lots^{2,3}</u>	<u>VDOT right-of-way⁴</u>
<u>Simple Rooftop Disconnection⁵</u> (§ 6-1312)				<u>N/A</u>		<u>N/A</u>
<u>Rooftop Disconnection to Alternative Practice⁶</u> (§ 6-1312)	<u>√</u>	<u>√</u>		<u>√</u>	<u>6</u>	<u>N/A</u>
<u>Sheet Flow to Vegetated Filter or Conserved Open Space</u> (§ 6-1313)	<u>√</u>	<u>√</u>		<u>√</u>	<u>√</u>	<u>N/A</u>
<u>Soil Compost Amendment</u> (§ 6-1314)	<u>√</u>	<u>√</u>	<u>1, 2</u>	<u>√</u>	<u>√</u>	<u>N/A</u>
<u>Reforestation</u> (§ 6-1311)	<u>√</u>	<u>√</u>	<u>1</u>	<u>√</u>	<u>√</u>	<u>N/A</u>
<u>Vegetated Roof</u> (§ 6-1310)	<u>√</u>	<u>√</u>		<u>N/A</u>		<u>N/A</u>

Matrix of Use and Location of BMPs

<u>Rainwater Harvesting</u> (§ 6-1315)	✓	✓				<u>N/A</u>
<u>Permeable Pavement</u> (§ 6-1304)	✓	✓	<u>2</u>			
<u>Infiltration Practices</u> (§ 6-1303)	✓	✓	<u>1</u>	✓	✓	
<u>Bioretention</u> (§ 6-1307)	✓	✓	<u>1</u>	✓	✓	✓
<u>Vegetated Swales</u> (§ 6-1308)	✓	✓	<u>1</u>	✓	✓	✓
<u>Wet Swale (linear wetland)</u> (§ 6-1316)	✓	✓		✓		<u>X</u>
<u>Filtering Practice</u> (§ 6-1317)	✓	✓		✓		✓
<u>Constructed Wetland</u> (§ 6-1318)	✓	✓		✓		
<u>Wet Pond</u> (§ 6-1319)	✓	✓		✓		
<u>Extended Detention Pond</u> (§ 6-1320)	✓	✓		✓		
<u>Manufactured (Proprietary) BMP</u> (§ 6-1321)	✓	✓		✓		✓

Matrix of Use and Location of BMPs

► Footnotes:

1. The Director may approve the use of BMPs on lots in residential subdivisions of no more than seven lots.
2. Soil compost amendments and pervious pavement used on residential subdivision lots may be treated as forest/open space and managed turf respectively in the runoff reduction calculation. However, a loss of 30% of the treated area over time is assumed for soil compost amendments and 50% of the pervious pavement to compensate for future conversions or disturbance of the area.
3. Non-bonded subdivision lots include five-acre lots that are not subject to subdivision control.
4. Use of the indicated practices is subject to VDOT approval.
5. Simple rooftop disconnection is allowed with Director approval on a case-by-case basis.
6. Water from downspouts may be directed to other BMP practices and use/location would be determined by the type of alternative practice.

Timelines and Grandfathering

▶ Grandfathering

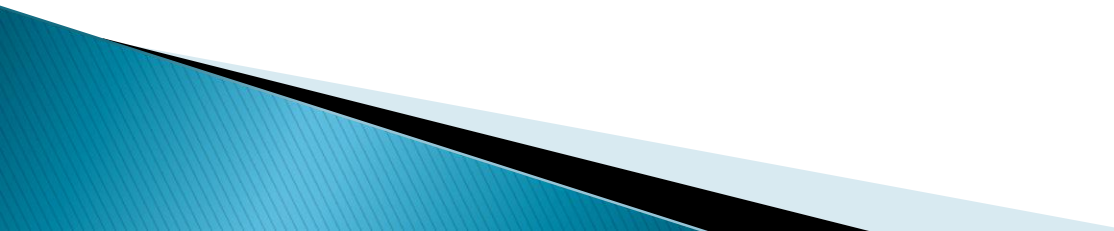
- Private projects
 - Plan approved before 7-1-2012
 - Construction must be complete by 6-30-2019
- Public projects
 - Funding approved before 7-1-2012
 - Construction must be complete by 6-30-2019
 - Projects using bonding are subject to different requirements

▶ Timelines

- Use technical criteria in place **at the time VSMP permit coverage first obtained**
- Use that criteria for two additional 5-year Construction General Permit cycles

Phase II Components

Issues and Considerations

- ▶ Pro Rata Share
 - Draft changes are being evaluated independent of the ordinance and may include:
 - One County-wide rate
 - Possible credit for infiltration practices
 - ▶ MS4 permit-related elements
 - Process and procedures for enforcement.
 - ▶ Additional items that may be identified in the public process
- 

Additional Opportunities for Input

- ▶ Stakeholder comments via the website – consider:
 - What do you like about the changes?
 - What are your top concerns?
- ▶ Formal review process:
 - September 10th – Authorization by BOS to advertise the ordinance, related code amendments, and PFM amendment.
 - October 9th – Planning Commission hearing
 - December 3rd – Board Hearing and approval

Questions and Comments

Thank You!

[www.fairfaxcounty.gov/dpwes/
stormwaterordinance.htm](http://www.fairfaxcounty.gov/dpwes/stormwaterordinance.htm)